

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:)	
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Jeffrey P. Allen)	Examiner:
)	
Serial No.: TBA (Cont. of 09/413,169))	Art Unit:
)	
Filed: Herewith)	
)	
Title: FUEL CELL CURRENT COLLECTOR)	

Assistant Commissioner for Patents
Box Patent Application
Washington, D.C. 20231

PRELIMINARY AMENDMENT

Dear Sir:

Preliminary to examination, please amend the above-referenced continuation application being submitted herewith as follows.

In the Specification:

On page 1, at paragraph 1, line 11, after the subtitle "CROSS REFERENCE TO RELATED APPLICATIONS," please replace the words "Not Applicable" with the following sentence:

-- This is a continuation of U.S. Patent Application Serial No.09/413,169, filed on
October 7, 1999.--

In the Claims:

Please add the following claims:

10. A current collector in accordance with claim 6 wherein:
each flat wire is parallel to adjacent flat wires.
11. A current collector in accordance with claim 6 wherein:
said plurality of flat wires are not parallel to ribs of said ribbed separator.
12. A current collector in accordance with claim 6 wherein:
said plurality of flat wires are coincident or are not coincident with flat wires of adjacent fuel cells.
13. A current collector in accordance with claim 6 wherein:
said plurality of flat wires provide support to the extent of their lengths and widths to the electrode.
14. A current collector in accordance with claim 6 wherein:
said plurality of flat wires are continuously and simultaneously slit from sheet metal.
15. A current collector in accordance with claim 6 wherein:
said plurality of flat wires possess a pitch and width configured to suppress or enhance the fuel cell electrochemical reaction.
16. A subassembly for use with a fuel cell comprising
a cathode,
a plurality of cathode current collectors bonded to the cathode with an adhesive,
an anode,
a plurality of anode current collectors bonded to the anode with an adhesive, and

a separator contacting the plurality of cathode current collectors and the plurality of anode current collectors.

17. The subassembly of claim 16 wherein the cathode current collectors comprise flat wires.

18. The subassembly of claim 16 wherein the anode current collectors comprise flat wires.

19. The subassembly of claim 16 wherein the separator comprises ribs which form flow fields.

20. The subassembly of claim 16 including flow paths for lateral fluid communication between adjacent ribs.

21. A subassembly for use with a fuel cell comprising
a cathode,
a plurality of cathode current collectors contacting the cathode,
an anode,
a plurality of anode current collectors contacting the anode, and
a separator including adjacent ribs contacting the plurality of cathode current collectors and providing for lateral fluid communication between the adjacent ribs contacting the plurality of cathode current collectors and including adjacent ribs contacting the plurality of anode current collectors and providing for lateral fluid communication between the adjacent ribs contacting the plurality of anode current collectors.

22. The subassembly of claim 21 wherein the cathode current collectors comprise flat wires.

23. The subassembly of claim 21 wherein the anode current collectors comprise flat wires.

24. A fuel cell stack comprising a plurality of subassemblies, each subassembly comprising

a cathode,

a plurality of cathode current collectors bonded to the cathode with an adhesive,

an anode,

a plurality of anode current collectors bonded to the anode with an adhesive, and

a separator contacting the plurality of cathode current collectors and the plurality of anode current collectors, and

a plurality of electrolyte holding members disposed between the subassemblies.

25. The fuel cell stack of claim 24 wherein the cathode current collectors comprise flat wires.

26. The fuel cell stack of claim 24 wherein the anode current collectors comprise flat wires.

27. The fuel cell stack of claim 24 wherein the separator comprises ribs which form flow fields.

28. The fuel cell stack of claim 24 including flow paths for lateral fluid communication between adjacent ribs.

29. A subassembly for use with a fuel cell comprising
a cathode,
a plurality of cathode current collectors contacting the cathode,
an anode,

a plurality of anode current collectors contacting the anode, and
a separator contacting the plurality of cathode current collectors and the plurality of
anode current collectors.

30. The subassembly of claim 16 wherein the cathode current collectors comprise flat
wires.

31. The subassembly of claim 16 wherein the anode current collectors comprise flat
wires.

32. The subassembly of claim 16 wherein the separator comprises ribs which form flow
fields.

33. The subassembly of claim 16 including flow paths for lateral fluid communication
between adjacent ribs.

34. A fuel cell stack comprising a plurality of subassemblies, each subassembly
comprising

a cathode,

a plurality of cathode current collectors contacting the cathode,

an anode,

a plurality of anode current collectors contacting the anode, and

a separator contacting the plurality of cathode current collectors and the plurality of
anode current collectors, and

a plurality of electrolyte holding members disposed between the subassemblies.

35. The fuel cell stack of claim 24 wherein the cathode current collectors comprise flat
wires.

36. The fuel cell stack of claim 24 wherein the anode current collectors comprise flat wires.

37. The fuel cell stack of claim 24 wherein the separator comprises ribs which form flow fields.

38. The fuel cell stack of claim 24 including flow paths for lateral fluid communication between adjacent ribs.

Continued on next page

REMARKS

Prior to examination on the merits, Applicant respectfully requests entry and consideration of the above amendments. Applicant respectfully submits that support for the newly added claims can be found throughout the specification and in the drawings.

Please apply any charges or credits to Deposit Account No. 19-0733.

Respectfully submitted,

Date:

February 4, 2002



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VERSION OF AMENDMENTS WITH MARKINGS TO SHOW CHANGES MADE

In the Specification:

At page 1, line 11, [Not Applicable] This is a continuation of U.S. Patent Application

Serial No.09/413,169, filed on October 7, 1999.

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